

**ABSTRACT OF THE DISCLOSURE**

[1098] Data address profiling allows determination of sources of code execution hindrance with different perspectives of memory references and allows correlation of sampled runtime events and memory reference objects, such as cache lines.

Associating sampled runtime events with data addresses provides for efficient and targeted optimization of code with respect to data addresses and physical and/or logical memory reference objects (e.g., memory segments, heap variables, variable instances, stack variables, etc.). An instruction instance is identified in relation to a sampled runtime event. A data address is determined from the instruction instance. From the determined address, a memory reference object is ascertained.